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A new species of *Phragmogibbera* (*Dothideomycetes*)

Wen-Ying Zhuang[1*] & Wen-Ying Li[1,2]

zhuangwy@im.ac.cn & ndwyli2002@163.com

[1]*Key Laboratory of Systematic Mycology and Lichenology Laboratory Institute of Microbiology, Chinese Academy of Sciences, Beijing 100101, China*

[2]*Soil and Fertilizer Institute, Guangdong Academy of Agricultural Sciences Guangzhou 510640, China*

Abstract — *Phragmogibbera herbicola* on herbaceous stems from Yunnan, China is described as a new species and illustrated. Distinctions between the type species of the genus and the new species are discussed.

Key words — morphology, taxonomy

Introduction

The genus *Phragmogibbera* Samuels & Rogerson based on *P. xylariicola* Samuels & Rogerson has been monotypic since its establishment (Samuels & Rogerson 1990, Kirk et al. 2001, www.indexfungorum.org). It is characterized by uniloculate pseudothecia, nonpapillate, carbonaceous, roughened to nearly smooth ascomata, bitunicate asci, septate ascospores that are smooth with the middle two cells dark brown, and apically attached, branched, cellular pseudoparaphyses. During our studies on dothideomycetous fungi from China, a similar fungus to *P. xylariicola* was encountered. It is distinguishable and described here as a new species of *Phragmogibbera*.

Material and methods

Recent collections of *Dothideomycetes* from Yunnan Province were studied. Ascomata from substrate were rehydrated and sectioned at a thickness of 10–20 µm with a freezing microtome (YD-1508A, Yidi Medical Instrument Co., Jinhua, China). Measurements were taken from the sections and squash mounts in lactophenol cotton blue solution. Photographs were taken with a digital camera (Canon G5, Tokyo, Japan) connected with a microscope (Zeiss

* Author for correspondence.

Axioskop 2 plus). The collection studied is deposited in the Mycological Herbarium, Chinese Academy of Sciences (HMAS).

Taxonomy

Phragmogibbera herbicola W.Y. Zhuang & W.Y. Li, sp. nov. **Figs 1–4**

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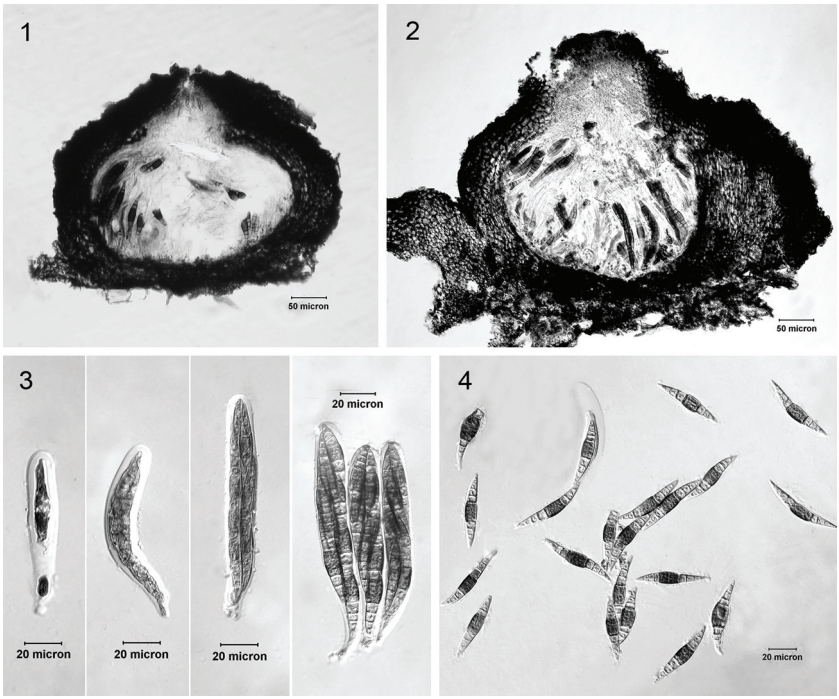
Etymology: refers to the substrate of the fungus.

Pseudotheciis subglobosis, 270–440 µm diam., 280–335 µm alt.; ascis clavatis, 8-sporis, 127–157 × 15–22 µm; ascosporis fusiformibus, 9-septatis, cellulis duabus mediis obscure brunneis , 56–70 × 9.6–12.2 µm.

Holotype: China. Yunnan, Dali, on dead stem of an unidentified herbaceous plant, 1800 m, 12-XI-2006, W.Y. Li 7334, HMAS 178154. Epitype: CGMCC 3.10146 (ex type culture).

Ascomata initially immersed, becoming erumpent through epidermis, mostly solitary, occasionally gregarious; pseudothecia carbonaceous, uniloculate, subglobose, nonpapillate or with a slightly protruding apex, dark brown to nearly black, surface slightly roughened, 270–440 µm diam, 280–335 µm high, opening through a well-developed ostiole; peridium of textura angularis, 44–105 µm thick, composed of dark brown, thick-walled cells 2.8–8.3 µm diam., cells at ascomatal surface not becoming blue-green in KOH; pseudoparaphyses branched, cellular, hyaline, septate, 2–3 µm wide; asci bitunicate, clavate to cylindrical-clavate, 8-spored, 127–157 × 15–22 µm; ascospores fusiform, tapering above and below to very narrow or nearly pointed ends, mostly 9-septate, with two middle cells brown to dark brown and swollen, other cells much paler to subhyaline, not constricted at septum, irregularly biseriate, 56–70 × 9.6–12.2 µm, two dark cells 12–18.3(–22) × 8.5–12.5 µm, other cells narrower. Anamorph unknown.

Notes: Consulting the early treatments of bitunicate ascomycetes by von Arx & Müller (1973) and Barr (1987) and considering the transversely septate ascospores as well as the monocotyledon substrate, *Leptosphaeria* Ces. & De Not. is a possible genus for our fungus. However, it is obvious that the gross morphology and anatomic structure of the Chinese collection do not fit any species of *Leptosphaeria*. In a study on fungi from the Guayana Highlands by Samuels & Rogerson (1990), the genus *Phragmogibbera* was published. The Chinese species agrees with the type species of the genus, *P. xylariicola*, from Venezuela in the shape, texture, and anatomic structure of pseudothecia, ascus apical apparatus, and shape of ascospores, especially the presence of the two brown middle cells in spores. *Phragmogibbera herbicola* with larger, 9-septate ascospores differs from *P. xylariicola* having 3-septate ascospores that are 30–37.5 × 5–7.5(–10) µm. In addition, cells at the ascomatal surface of *P. herbicola* do not change color in KOH while those of *P. xylariicola* turn blue-



Figs 1–4. *Phragmogibbera herbicola* (from holotype): 1–2. Structure of pseudothecium in longitudinal section; 3. Asci at different developmental stages; 4. Ascospores released from asci.

green. Finally, *P. herbicola* occurs herbaceous stems while *P. xylariicola* was found on fruitbodies of *Xylaria*.

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